From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: dt@artscience.scotborders.co.uk (David Topham - Arts & Science)
Subject: Re: "BA" Fasteners
Message-ID: <199607021817.UAA18183@sun.scotborders.co.uk>

Sandy Blaze said:

```
>The "BA" screws are an entirely different... ...The
>commonest ones are 0, 2, 4, 6, and 8.  Once in a reare while you see the
>"odd" numbered ones, but not in electronic gear.
                          ^^^^^^^^^^^^^^^^^^^^^^
```

Don't you believe it!!! As an erstwhile supplier to the telephone company in the UK I can tell you *they* only use the *odd* numbered sizes - to discourage pilfering (and to stop ordinary humans taking things apart, an activity which, of course, is still illegal in the UK)!! As the 'phone people still have the right of unimpeded entry to our "Englishmen's castles", my "odd" BA nut spinners are stashed away under the (this space intentionally left blank).

Cheers, David Topham, GM3WKB dt@artscience.scotborders.co.uk

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: Dean Davidson <ddavidso@metz.une.edu.au>
Subject: Re: "BA" Fasteners
Message-ID: <1.5.4.16.19960703164452.232f3358@metz.une.edu.au>

At 13:47 2/07/96 -0500, Sandy wrote:

> The "BA" screws are an entirely different 'species' than the
> Whitworth screws.

[....]

> Once in a reare while you see the
> "odd" numbered ones, but not in electronic gear. I dealt with Marconi
> gear for ages and they were full of "BA" stuff. I even have some extra
> hardware still and some BA taps!

Actually if you are in Australia you will find lots of 5BA screws in Boat Anchors

A local manufacturer AWA (no sadly a shadow of its former self!) used 5BA screws everywhere. They are about the same size (but with a finer thread) to a #4-48.

Pity us Aussies - we have to have 3 sets of tools - Metric, SAE and Whitworth!

(and three times the storage for small nuts and bolts - Metric, UNC/UNF and Whitworth)

--

Dean Davidson ddavidso@metz.une.edu.au
Dept Psychology Phone 61 67 73 2585
University of New England Fax 61 67 73 3820
Armidale NSW 2351 Australia VK2 ZID

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: sinned@VNET.IBM.COM
Subject: "Radio" mag/ thanks
Message-ID: <199607031607.LAA16482@uro.theporch.com>

Thanks to all who provided the history of that magazine. Sure saved me alot of time trying to research it myself, BTW just one more advantage of BA list membership. The cover says in tiny letters "Established 1917", indicating the origin was "Pacific Radio News".
I've been reading every '30s radio book I've been able to borrow or buy and it's interesting to note that some things haven't changed at all. Some burning issues then were: Rude language over the airwaves; code-vs-codeless license exams; QRM; QRP-vs-QRO; deterioration of the 'quality' of the radio hobby; and advertisers pushing the envelope of truth with exaggerated performance claims. I suspect these will be the same issues 50 years from now!
Dennis W5FRS

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: Jeffrey Herman <jherman@hawaii.edu>
Subject: 3rd, 2nd, and 1st class R/T certs are alive and well
Message-ID: <96Jul3.121859hwt.264425@uhunix5.its.Hawaii.Edu>

Well, the radiotelegraph certificates are still in existance! I wonder for how long, though...

> Commercial Radio Operator License Examinations:
> Franklinton, NC - - 10 August 96 (Saturday) - - 11:00 a.m.
> Franklinton Public Library
> Corner of Mason St. and Hillsborough St.
> (shares a parking lot with Police Station-Town Hall)
> Licenses Attainable:
> WARNING! At this exam session, we will be using NEWLY-ISSUED question
> pools for elements 1, 3, 7, 8 & 9....and perhaps for elements 5 & 6.
> Marine Radio Operator Permit - - Element 1

>   General Radiotelephone Operator - - Elements 1 & 3
>   GMDSS Radio Maintainer - - Elements 1, 3 & 9
>   GMDSS Radio Operator - - Elements 1 & 7
>   Ship Radar Endorsement - - Element 8
>   3rd Class Radiotelegraph Operator's Certificate--Elements 1, 5, T1 & T2
>   2nd Class Radiotelegraph Operator's Certificate--Elements 1, 5, 6, T1 & T2
>   1st Class Radiotelegraph Operator's Certificate--Elements 1, 5, 6, T3 & T4
>   NOTE: Exams will be held on the 2nd Saturday of EVEN-numbered months.
>   For more details, call:
>   Steve Modena AB4EL (919) 787-7618   ab4el@nando.net
>   or Terry Murphy AB4VJ (919) 494-2088

Jeff KH2PZ / KH6

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: jproc@worldlinx.com
Subject: 4CX250B's for Sale
Message-ID: <Chameleon.4.01.2.960703222028.jproc@>

Dear BA'ers,

I have just been informed by my friend in Vancouver that a quantity of EIGHTY used 4CX250B tubes and sockets are available for purchase.

Tubes   - $US 30 each
Sockets - $US 15 each

Contact - TOM BRENT

US Address

Box 1552
Sumas WA
98295

or

Canadian Address

Box 150
Dewdney B.C.
V0M 1H0

Phone (604) 826-4051 (please observe Pacific Standard time hours if calling)

Here is some background. Currently, HMCS Saskatchewan, a decommissioned RCN destroyer, is being stripped down by the British Columbia Reef Society in preparation for sinking and her final mission which will be a marine reef. Tom is acting as an agent for this non-profit society. Right now, the ship has five AN/SRA502 RF power amplifiers aboard. These are broadband amps, 1.5 to 24 Mhz at 1 kw each. The 80 tubes AND sockets are being pulled from these amplifiers, although the amplifiers themselves are for sale on a best offer basis. If the material is not sold prior to sinking day, (several months from now), whatever remains unsold will literally go to the bottom. Since Tom is not on the Internet I am passing this message on his behalf.

Regards,
~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Jerry Proc VE3FAB
E-mail: jproc@worldlinx.com
Radio Restoration Volunteer
HMCS Haida, Toronto Ontario
~~~~~~~~~~~~~~~~~~~~~~~~~~~~

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: jml@spider.lloyd.com (Jim Lockwood)
Subject: anti-whatever messages
Message-ID: <m0ubHO0-001NcaC@spider.lloyd.com>

Gang,

Let me be perfectly clear: Neither flames, derogatory comments, nor anti-<insert appropriate group name here> comments belong on boatanchors.

If you have an opinion or comment to make about the (inappropriate) comment propagated earlier, do it privately.

If my message isn't clear to you, email me privately (there is that word again) and I will help you be successful in understanding the purpose of this list.

73,

Jim - km6nk

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: midshires@cix.compulink.co.uk (Andrew Emmerson)
Subject: Re: B.A. screws

Message-ID: <memo.750231@cix.compulink.co.uk>

> Once in a rare while you see the "odd" numbered ones, but not in electronic gear.

I think the only people who regularly used odd-numbered B.A. nuts and bolts were the British Post Office, who used 5BA and 7BA screws in step-by-step telephone equipment. These odd numbers are very rare otherwise.

>I dealt with Marconi gear for ages and they were full of "BA" stuff.

Absolutely. All British made electrical equipment used B.A. nuts and bolts until we went metric about 20 years ago. In point of fact, the B.A. system is itself metric and based on an obscure Swiss watchmakers' thread but in deference to the ISO and the worldwide movement to a standardised metric system, British industry has changed over to metric, replacing B.A., Whitworth and UNF, UNC etc. Marconis were also very fond of UNF and UNC, given that much of their gear was inspired by RCA designs and intended for export to North America.

>I even have some extra hardware still and some BA taps!

Me too. You can still buy (newly made) B.A. screws for maintenance purposes -- all the hobbyist shops have them -- and you can also get (new old stock) taps and dies.

Andy G8PTH.

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: KWDouglas@aol.com
Subject: Re: Batteries
Message-ID: <960703091039_347523595@emout10.mail.aol.com>

>Yup ! Same here, I have never had a leaky Energizer..In fact I've had
>Energizers in some equipment for 4 or 5 years and they still had decent
>life in them after all that time..On the other hand I have had very bad
>experience with Duracell leakage to the point I refuse to use

The totally differing alkaline experiences are baffling. Wonder if there is just one big alkaline manufacturer private labeling for the big names. (One day a bad batch comes out with logo "E", a week later a bad batch comes out with logo "D"!)

"E" & "D" have both leaked on me. An "E" tried to eat the insides of my Simpson 260. In the beginning I blamed myself for not periodically replacing batteries in meters, etc. But it became just too common an occurance. I've even had them go gooey on the shelf in less than 1 year.

The switch was made to Ray-O-Vac alkalines, from Walmart, about 4 years ago. Have yet to have one leak. Life (& shelf life) seems to be as good as anything else used. Price is usually lower than the nationally advertised brands. Radio Shack alkalines have not been tried here.

Kent, K9JCR
KWDouglas@aol.com

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: "Andy Howard, WA4KCY" <102452.362@CompuServe.COM>
Subject: Re: Batteries
Message-ID: <960703154743_102452.362_DHT51-2@CompuServe.COM>

Hello battery users,

I was just wondering with all the good discussions about battery life, leakage, guaranteed replacement of damaged items caused by the batteries how far the warranty goes. Think there might be a chance to get my BC-611F replaced if it was damaged? That would put the pink bunny to scratching his head. I use eleven 9 volt batteries in series for the B+ and that makes it 11 times more likely to have a leaking battery.

My biggest problem has been with VOM's. The batteries last such a long time in these applications that they stay in longer and would be more likely to leak. Most battery manufacturers suggest removing the batteries if you are not going to use them for a long period of time. I have a 1-1/2 volt battery that had been in a BC-611F since August, 1945 and it had not leaked. May be a record.

I remember when I was a kid and experimenting with projects out of the Boy Electrician of asking the telephone man for used batteries. Rural phones used to have a 3 volt battery located outside where the phone line came into the house. They were 2 of the big 1-1/2 volt cells in a metal case. Some of them were good for running my gadgets a long time.

Then of course some of us made our own batteries but they would not fit a flashlight.

Regards,

Andy Howard, WA4KCY
AMI #9

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996

From: Andy Wallace <wallace@mc.com>
Subject: batteries -- MAKE A CLAIM
Message-ID: <9607031606.AA00875@taku>

Just a quick note here. My dad had an old Simpson 260 which some major brand of battery leaked in. He filed a claim and got a new series 260 out of it after they determined that repair was impractical.

So when in doubt, call the manufacturer. If they put a guarantee on it by all means take advantage.

Sorry I can't give any specific details. I do know that the new 260 won't mate with the old Simpson transistor checker docking unit and I could be wrong but the picture makes it look like the probes are different, too.

73,
--Andy
wallace@mc.com

P.S. It's always safer to remove batteries if you're going to leave something unused for long periods.

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: dave metz <metzd@cfw.com>
Subject: BC 779 bad caps/too many hours
Message-ID: <2.2.32.19960704023449.00682e88@bashful.cybercafe.cfw.com>

I recently fired up one of my two BC 779's and got a nasty shock from the variable cap on the AVC transformer--T6. Additionally, there was no AVC control at the gain pot, it just ran with its own steady state mind. Thanks to a post a while back about expected resistance to ground on the agc buss being at least 6 megs, I suspected a bad cap when this read about 200k to ground I felt I was on the way. Well sort of. Now that this project is over, I probably wouldn't do it again--- time to put in on the list for someone with more time than me.. Basically in twelve of those .01's that look like a mica but are really paper, 4 of the twelve were quite leaky. If they had all been under the main chassis it might not have been so bad. Even the ones in T4 and T6 and I might not have complained. But after fixing all those, I still read about 1 meg to ground. It turns out there is one in the phasing box but it wasn't bad. Hmmmm..   where can they be?

After much reading of the schematic, it seemed that there might be some in the RF deck because I couldn't find them on the chassis. Sure enough -- 5 of them are BURIED in the rf deck along the audio side panel.. Several hours later the RF deck was out and the culprit .01 was finally found. And I thought getting the RF deck out of a R390 was tough! It also turns out that all 4 were the Sagumo caps. The unexplainable is still there to some extent. I now read 8 meg on the agc buss, and all caps are replaced but my other 779 reads almost infinity. However, I give up because it seems to work great now.

Moral of the story: There is more to the BC779 than meets the eye. After pulling the Rf deck, one still has dozens of little screws to take out to remove the side panels to get at them. It is very obvious that the military modularization that occurred in the R390 was because of this type of mess in repairing.

I have heard that the SP600 requires major time to get the bad caps out. After this exercise I don't think I will look for one of those now---- just stay with the 390's.

I hope this helps someone save a lot of time based on my experience.
73's Dave
metzd@cfw.com
Staunton, VA

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: n5off@w5ddl.aara.org
Subject: BC-348 Start Current
Message-ID: <408726@w5ddl.aara.org>

I have a BC-348 that I run on a 3A (I think) military power supply that was made to power a poison gas detector. With the original fuse in the thing, the dynamotor start current would blow the fuse.

Since this supply was CHEEEP and I had two of them, I did what any licensed professional engineer shouldn't do (hey I didn't stamp this work) and increased the fuse to about 8A, just enough to let the dyno start without blowing. The PS protests a bit by clicking for 1 sec, but then settles down and runs the rig fine. Once the dyno was running, I could also power the filaments of an ARR-15 at the same time with no PS problem.

Conclusion: You may want to measure the start current while using batteries for power, and then make a conclusion as to what % surge you want to inflict on a PS, but I think getting a 10A is overkill (unless it is as cheap as the little ones I got).

You may want to try your local copy machine repair guy (our ham club has one) and ask about copier 24V supplies.

73 de tom

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: jproc@worldlinx.com
Subject: Re: BC348 Questions
Message-ID: <Chameleon.4.01.2.960702235635.jproc@>

>>3) Can't believe that the unit is powered off momentarily when switching
>>   from AVC to MVC. What might have been the rationale for doing this?
>
>Never heard this one explained but I have heard the question asked several
>times. If you get a reasonable answer, please post it!

Conard,

In many instances when the choice of components doesn't make sense, its usually because some component is overstocked in the company's inventory and there is pressure on the engineer to use that part in some future design.

In this case, the AVC/OFF/MVC switch is a single pole, triple throw, ganged switch. Assuming AVC= position 1, and OFF= position 2, and MVC = position 3, there is no reason why positions 1 and 2 could not be interchanged (or 2 and 3) at the design stage. This would leave the OFF position at either end and then it would work logically.nless we can locate the original designer, this question shall likely remain a mystery.

Regards,
~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Jerry Proc VE3FAB
E-mail: jproc@worldlinx.com
Radio Restoration Volunteer
HMCS Haida, Toronto Ontario
~~~~~~~~~~~~~~~~~~~~~~~~~~~~

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: arc5@ix.netcom.com (David Stinson)
Subject: BENDIX MT-11B KEY
Message-ID: <199607030755.AAA02505@dfw-ix7.ix.netcom.com>

I got a NOS Bendix MT-11B key here. Very pretty thing.
It came mounted on a O.D. painted wooden slab,
about 10 inches by 4 inches by a quarter inch deep.
It appears to be a factory mounting.
Does anyone know the scoop on this key?

73 DE Dave Stinson AB5S
      arc5@ix.netcom.com

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: Albert S Woodhull <aswNS@hamp.hampshire.edu>
Subject: Re: BOATANCHORS digest 753
Message-ID: <Pine.SUN.3.91.960703082654.5232A-100000@hamp>

wb6zwc@ns.net wrote:

> 1. What is the so called "back to back" configuration referring to?
..

I think what you are referring to is a configuration like this:

```
                ma
     ---+----o meter o----+----
        |                 |
        +-------|>|-------+
        |                 |
        +-------|<|-------+
```

The diodes are silicon power rectifiers, rated at an amp or so.
The idea is that diodes are highly non linear and have effective
resistances that are very high for the small fraction of a volt drop
across a sensitive microammeter or milliammeter, so they won't affect
currents in the normal range of the meter. This won't prevent an
accidental higher current from pinning the meter, but it will prevent
it from bending the pointer or smoking the coil. This works well for
me in protecting a 500 ma meter I use to monitor current output from a
small solar cell.

If you really expect to make gross mistakes, a fuse in series with the
whole thing would be a good idea.

Don't mistake this for a circuit to protect a voltmeter, that's a
different problem.

73, Al N1AW
--

Al Woodhull
awoodhull@hampshire.edu
n1aw@k1mea.#wma.ma.usa.na
n1aw@ka1jy.ampr.org

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: w5tvw@juno.com (Sandy Blaize)
Subject: British Association (BA) threads
Message-ID: <19960703.091727.7759.0.W5TVW@juno.com>

Here's a sample of the "BA" vs. the US small screw system.
I will give closest US size to the BA size for comparison only!

BA# size	Pitch in mm.	Major diam.	Thd/ inch	closest US size
0	1	6mm	25.4	Same as 6 X 1 metric
2	.81	4.7mm	31.4	10-32
4	.66	3.6mm	38.5	larger than 6-40 UNF
6	.53	2.8mm	47.9	close to 4-48 UNF
8	.43	2.2mm	59.1	close to 2-56 UNF

American threads have an included angle of 60 degrees, as do the International Metric system. The BA included angle is 47-1/2 degrees! I have only included a few sizes here. Anyone REALLY interested in studying this matter further should refer to a copy of "Machinery's Handbook", published by the Industrial Press. It should be available at any well stocked library or your local tool house that sells machinist's or industrial tools (not your corner hardware store!) The book sells frequently at MSC Tools on sale for around $50 and contains a WEALTH of information for anyone interested in lathes, metallurgy, hardware, tables, bolts, nuts.....you name it.

73,

Sandy Blaize, W5TVW
Boat Anchors collected, restored, modified, traded & used!
w5tvw@juno.com
417 Ridgewood Drive,
Metairie, LA., 70001.

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996

From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: Diode Load?
Message-ID: <80635.ddillman@igc.apc.org>

While looking for a place to attach a strip chart recorder to the R-390A for power line noise measurement, I started sniffing around the diode load pin jack on the front panel. It gives a nice negative voltage corresponding to signal stregnth of around 8V. But I notice that the AVC control have the opposite effect it does on the signal stregnth meter. Selecting FAST AVC causes the VOM on the diode load to remain more steady. So my questions are these:

o What's the diode load jack intended for, anyway?

o Does anyone see a problem attaching a strip chart recorder to the diode load jack?

o Does anyone *have* a strip chart recorder they'd like to part with for this purpose?

Dick Dillman
WPE2VT N6VS ex-WA2BJK
<ddillman@igc.apc.org>
Collector of Heavy Metal:
Harleys, Willys and Radios Over 100lbs.

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: MODSTEPH@ACS.EKU.EDU
Subject: Dynamotor sold
Message-ID: <01I6N88YEDH0000LKR@ACS.EKU.EDU>

..as the SUBJECT line says...

Thanks to all for the inquiries - first in was from someone only 20 miles away, so no shipping...

73, Al N5AIT
modsteph@acs.eku.edu

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: MODSTEPH@ACS.EKU.EDU
Subject: Dynamotor, anyone?

Message-ID: <01I6N0G6TS1E000ILW@ACS.EKU.EDU>

Somewhere along the line I picked up a dynamotor which I do not need and would be happy to pass along. Markings on the side: Eicor (Chicago) Dynamoter. Input 14 V 40 Amp; output 1000 V .35 A. No. 109-84609, ML 6125-60

It is on a base with snap-on fasteners (like on the top of an ARC-5, only bigger) and has a control/connector/fuse box mounted on top of it, with two outputs marked PL-59 TRANS. and PL-61 TRANS.

Would rather not ship it (heavy), but if someone twists my arm...   Would like $20 plus shipping from Richmond, Kentucky (about 100 miles S of Cincinnati; 160 miles N of Knoxville...).

Also, anyone know what it came from? Oh, yeah - it is marked "Fungicide treated January 1945..." Assume it is military. I have no idea whether or not it works, but it looks to be in decent condition.

73, Al N5AIT
modsteph@acs.eku.edu

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: Andy Wallace <wallace@mc.com>
Subject: Filament fuse: use 12V or 120V one?
Message-ID: <9607031610.AA00883@taku>

Some of you might remember my TR-3 had no filament power last month. When I opened it up, I found (as many suggested) a filament fuse! Yahoo. (three 12JB6 in final)

This was mounted with a holder; dunno if this was a mod or not.

Anyway, the one that was in there was a 120V 7.5A fast-blow one. The manual states 8A. I installed a 120V 8A fast-blow one and things have been fine since.

My dad said that I should put a 12V auto fuse in there because the 120V one "will blow too soon." The Drake manual doesn't state.

I haven't checked Terman for fuse info -- but is this true? Amps are amps, I say, but then P=E*I and maybe there is a thermodynamic part to this mystery I am missing.

73,
--Andy
wallace@mc.com

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: Henry van Cleef <vancleef@bga.com>
Subject: Re: Filament fuse: use 12V or 120V one?
Message-ID: <199607032103.QAA23194@zoom.bga.com>

As Andy Wallace said
>
> Anyway, the one that was in there was a 120V 7.5A
> fast-blow one. The manual states 8A. I installed
> a 120V 8A fast-blow one and things have been fine
> since.
>
> My dad said that I should put a 12V auto fuse in
> there because the 120V one "will blow too soon."
> The Drake manual doesn't state.
>
> I haven't checked Terman for fuse info -- but
> is this true? Amps are amps, I say, but then
> P=E*I and maybe there is a thermodynamic
> part to this mystery I am missing.
>

You won't find much information on fuses in electronics texts. I had to get a little bit smart on the topic some years ago when we were coming up with a UPS (uninterruptible power system) for the FAA enroute air traffic control display system and the burning question was protection of the DC-AC static inverter transistors against startup surge currents.

First of all, fuse voltage ratings are "the maximum voltage that the fuse is guaranteed to open on catastrophic failure" (i.e., dead short, fast blow). This issue here is that the fuse wire will vaporize and splatter inside the fuse cartridge and that splattering may reconnect the circuit, or that enough heat and mechanical force will be generated to fracture the fuse case. The message is "don't use 12 or 32 volt fuses on 110 volt circuits."

The speed at which a fuse will open a circuit is roughly a function of "how many joules per second are needed to melt the fuse wire?" The resistance of the fuse wire itself, with the current through it produces the joules needed. As I recall, maximum performance of a fast blow fuse on a several thousand percent overload ran on the order of 50 milliseconds. That may be wrong, but my recollection was that what we were looking at was 1300 amps max for 1/2 cycle on 60 cycle power, and a 2-5 amp fuse would never notice it---you had to hold the load for several half cycles to melt the fuse wire. The "joules/sec" figure is something of a misnomer, because you are really looking at joules/millisecond for fast blowing, extrapolated out to about 50 or 100 milliseconds.

The speed at which a fuse will open a circuit on 101% or even 110% overload is a function of the tolerances in the fuse wire, the fuse construction, and a whole bunch of things. "Days" and "weeks" are the units of measure here. Fuses are not binary devices, that work on 100% load forever, and open up the moment you add a few ma. to the load. Circuit breakers have more clearly defined binary trip points, although they take forever (100s of milliseconds) to clear a catastrophic fault.

Slow-blow vs. fast-blow is a matter of fuse construction. The type of construction that uses a spring to maintain fuse wire under tension will open the fuse as the wire begins to melt, but you have to get a bunch of joules into the wire over some period before that happens. There is generally enough additional thermal mass in the wire that the fuse will swallow a 500% overload for several hundred millisconds (typical for starting an AC motor), but will open up within seconds if the 500% overload is maintained. Generally, the failure issue with fast blow fuses on "start overload" circuits is not whether the fuse blows on the overload, but whether the wire begins to melt, then refuses, on start surges, thinning the wire in spots and causing the fuse to open on continuous 75% or 80% of rated current after a while.

--
****
Hank van Cleef vancleef@bga.com vancleef@tmn.com
****

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: Lrware@aol.com
Subject: Firebottle VLF Beacon
Message-ID: <960703202515_148583771@emout09.mail.aol.com>

Howdy folks, if anyone has or knows where I can download
a firebottle based VLF Beacon design, I'd love to see it.
Would also be interested in pointers to sand-state designs.

Thanks
-Larry Ware
lrware@aol.com

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
Subject: FS: Heath SB-200 HF AMP

For Sale: excellent condition SB-200 1 KW amp. Don't reply here, please call my friend Richard, KJ6TL at (801) 966-9869. No Richard is not in CA, he is a Utah transplant from some years ago. Needs to make room for some other gear, and currently is not active in HF although he has the equipment. I promised I would post this for him. Oh, $300 plus shipping.

Milt
KJ7KP

------ Forwarded message ends here ------

Dick Dillman
WPE2VT N6VS ex-WA2BJK
<ddillman@igc.apc.org>
Collector of Heavy Metal:
Harleys, Willys and Radios Over 100lbs.

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: Mikhael Brown <mikhael@hpcmmp13.sj.hp.com>
Subject: FS: 4-400A, NIB
Message-ID: <199607031403.AA102832605@hpcmmp13.sj.hp.com>

I have an extra 4-400A new in the box. It is a "Gammatron Tube" made by Heintz and Kaufman. I am asking $125. e-mail or call (408)-578-1076 home or (510) 505-5582 work.

Mike N6WIG

--
mikhael@hpcmmp13.sj.hp.com

San Jose, Ca

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: Karan Lee Carruth <klccarru@tenet.edu>
Subject: FS: Rack Stuff
Message-ID: <Pine.OSF.3.91.960702154935.26792B-100000@gaston.tenet.edu>

I have approximately 100 screws for electronic racks. They are the type that use the Tinnerman nuts. Phillips head with a rounded head with a trim ring around the edge. (if that makes sense) I have a lot of the proper nuts also but have not counted them. I also have nylon washers to go under the heads of the screws. All for $25.00 including CONUS shipping.

I also have 39 rack handles. Most chrome but some black. Different sizes but most are in pairs. All for $40.00 including CONUS shipping.

I have two Micro Match model No. 574.23 200 Watt couplers for forward and reverse power measurement. $20.00 each including CONUS shipping.

I also have five Sodeco mechanical counters. 5 digits. Really nicely made. I think that they are 24 volt but am not certain. $20.00 for all including CONUS shipping.

Three Astro Dynamics, Inc. 352 9572 040 heat sinks for power transistors. $10.00 for all including CONUS shipping.

Lenox, WA5OVG
klccarru@tenet.edu

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
Subject: FS:DRAKE RV-3 remote vfo

I have a drake RV-3 remote vfo in very good condition. Will ship post-paid for $100.00

Troy

------ Forwarded message ends here ------

Dick Dillman
WPE2VT N6VS ex-WA2BJK
<ddillman@igc.apc.org>
Collector of Heavy Metal:
Harleys, Willys and Radios Over 100lbs.

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: "Lahlum-FLR111 Ross" <ross_lahlum@msmail.wes.mot.com>
Subject: FW: Meter protection
Message-ID: <9607030718.AA05439@kay.wes.mot.com>

>There was a thread last year about protecting meters. It had to do with
>putting a couple of diodes "back to back" across the meter terminals.

>1. What is the so called "back to back" configuration referring to?

2 zener diodes in series, connected at their anodes:

```
-----------|<|----|>|---------
```

(Sorry, that's the best I could do w/ ascii graphics!)

>2. Just any old diode or some special diode for this application?

This would depend on what kind of voltage might be reaching the meter, and what current. If you had a very high voltage to the meter, & couldn't find the right zeners, you could go with a high piv diode like the 1N4007.

If you really wanted to design in the *right* part, you could get special transient supression diodes, which are generally a pair of zeners specially made for this kind of abuse.

>3. Will it work for any meter no matter what it is monitoring?

Again, that depends. You're making a diode limiter that clips above a certain voltage.

>I have five, three hundred dollar, meters that need good protection from
>my mistakes and other things that happen to meters electrically.

Check the schematic of your meter. If it's a $300 meter (ie a *quality* one), it may already have a diode clipper across the movement, and a fuse behind the input terminals. If it's just a raw meter movement, then you should definitely protect it.

73,
Ross
ross_lahlum@msmail.wes.mot.com

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996

From: Al Klase <alklase@postoffice.ptd.net>
Subject: Re: FW: Meter protection
Message-ID: <199607031303.JAA11400@ns1.ptd.net>

At 02:16 AM 7/3/96 -0500, Ross wrote:

```
>
>>There was a thread last year about protecting meters.  It had to do with
>>putting a couple of diodes "back to back" across the meter terminals.
>
>>1. What is the so called "back to back" configuration referring to?
>
>2 zener diodes in series, connected at their anodes:
>
>-----------|<|----|>|---------
>
```

This arrangement only works with zener diodes.

The usual trick is to install PARALLEL (opposing) silicon diodes across the meter MOVEMENT. Remember that a voltmeter is an ammeter movement with a series resistor. In most cases the voltage across the movement at full scale deflection will be much less than 0.6 volts. So the diodes do not conduct.

```
     -------|<-------
        |        |
         --->|----
```

```
>
>>2. Just any old diode or some special diode for this application?
>
```

In the parallel circuit you can use "any old diode", say 1 amp silicon e.g. 1N4001. The reverse voltage rating is not a factor because it is protected by the other diode.

As Mr. Ross suggests, there are probably some more sophisticated protection devices, but this setup is much, much better than nothing.

73,
Al
Al Klase - N3FRQ
alklase@prolog.net
Flemington, NJ

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: Fwd: FS: Heath SB-200 HF AMP
Message-ID: <80630.ddillman@igc.apc.org>

```
*NOTE* The message below is a re-post from rec.radio.swap.  All
replies must go to the person making the post, not me.

----- Forwarded message begins here -----

From: Miltons@aol.Com  <Miltons_aol_Com@gifl.com >
Newsgroups: usenet.rec.radio.swap
From boatanchors@theporch.com  Wed Jul  3 22:16:48 1996
From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: Fwd: FS:DRAKE RV-3 remote vfo
Message-ID: <80620.ddillman@igc.apc.org>


*NOTE* The message below is a re-post from rec.radio.swap.  All
replies must go to the person making the post, not me.

----- Forwarded message begins here -----

From: Michelle Nicolls   <mnicolls@snowcrest.net>
Newsgroups: usenet.rec.radio.swap
From boatanchors@theporch.com  Wed Jul  3 22:16:48 1996
From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: Fwd: KWM2A ROUND, ETC FS
Message-ID: <80625.ddillman@igc.apc.org>


*NOTE* The message below is a re-post from rec.radio.swap.  All
replies must go to the person making the post, not me.

----- Forwarded message begins here -----

From: Hsheps@primenet.Com  <Hsheps@primenet.Com >
Newsgroups: usenet.rec.radio.swap
From boatanchors@theporch.com  Wed Jul  3 02:43:00 1996
From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: Fwd: Vintage National Receivers to be Sold
Message-ID: <80381.ddillman@igc.apc.org>


*NOTE* The message below is a re-post from rec.radio.swap.  All
replies must go to the person making the post, not me.

----- Forwarded message begins here -----

From: The Farmers   <farme007@tc.umn.edu>
Newsgroups: usenet.rec.radio.swap
```

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: "Grant Youngman" <nq5t@gte.net>
Subject: HC-10 Instability
Message-ID: <199607032012.PAA02742@uro.theporch.com>

Anyone out there with a Hammarlund HC-10 noticed a tendency for the frequency to pull as the AGC voltage is driven negative? I don't know yet whether its the BFO or 395 KHz conversion oscillator that is changing frequency -- haven't had the time to start trying to debug the thing .....

Its not very noticeable on SSB, but is on CW -- giving a nicely pronounced chirp to strong received signals. Reducing the IF input level to the HC-10 reduces the pulling effect -- but at the point where it goes away, the signal input is clearly well below what it should be for normal output level and normal AGC action.

(Aside from this slight flaw, the HC-10 sure does turn the R390A into a nice SSB receiver ...)

Grant/NQ5T

Grant Youngman / NQ5T
nq5t@gte.net
HTTP://home1.gte.net/nq5t/index.htm

Beautiful downtown Double Oak, TX
(near Dallas)

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: Re: HC-10 Instability
Message-ID: <80588.ddillman@igc.apc.org>

On Wed, 3 Jul 1996 15:12:49 -0500 (CDT),
Grant Youngman <nq5t@gte.net> wrote:

>Anyone out there with a Hammarlund HC-10 noticed a tendency for the
>frequency to pull as the AGC voltage is driven negative? I don't
>know yet whether its the BFO or 395 KHz conversion oscillator that is
>changing frequency -- haven't had the time to start trying to debug
>the thing .....

I've never had mine do that, Grant.

>(Aside from this slight flaw, the HC-10 sure does turn the R390A into
>a nice SSB receiver ...)

Yes, indeedy.

Dick Dillman
WPE2VT N6VS ex-WA2BJK
<ddillman@igc.apc.org>
Collector of Heavy Metal:
Harleys, Willys and Radios Over 100lbs.

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: MAB@delphi.com
Subject: Herb Brier, W9EGQ
Message-ID: <01I6M56LDOHE8YFPZN@delphi.com>

On 2-JUL-1996 21:04:29.98, Larry, va3lk / wa3zia wrote:

>Radio did publish a lot of firsts outside of amateur radio. They had a good
>business but it kept changing on them and they seemed at times to have a
>hard time keeping up with the times. There was a w9egq, Herb I think, who
>wrote for them for a long time, great stuff he wrote.

I believe Larry is referring to Herb Brier, W9EGQ, who was, among other things, the Amateur Radio editor and columnist for Popular Electronics magazine in the late 50's. Herb's column was called "The Transmitting Tower", and it launched many a young lad (present writer included) into the exciting and mysterious (to a 12 year-old lad) world of Amateur radio and electronics.

BTW, Popular Electronics was a Ziff-Davis publication launched in Oct 1954. At that time Ziff-Davis also published Radio and TV News (formerly Radio News) which changed its title to Electronics World in 1959. Electronics World merged with Popular Electronics in 1972 or 1973. The latter ceased publication in 1982 but reappeared as a Gernsback Publication in 1987 first as Hands-On Electronics for two years and then back to Popular Electronics in 1989.

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%                                                                    %
% Michael A. Burke, Synetics Consultants             +============+  %
% PO Box 439, 11 Scenic Dr, Westminster, MA 01473    | o    _   o |  %
% 508-874-0908  mab@delphi.com                       |   /` `\    |  %
%                                                    |  ( /\/ )   |  %
% Self-confessed test equipment jockey and junkie    |   \,_,/   |  %
% (from all those years spent chained to a service   | o       o |  %
% bench at "Laff-at-it" Radio Electronics).          |   o   o   |  %
%                                                    | o   .   o |  %
%    Formerly, "The Hippie City Radio Doctor"        |           |  %
%               State College, Pennsylvania          | :   :   : |  %
%                                                    +===========+  %
%    Now, just another Urban Computer Cowboy.                       %
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
```

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: ks0f@i1.net (MIKE SANDERS)
Subject: HRO5 for FB7?
Message-ID: <199607031424.JAA22105@mail1.i1.net>

Greetings again this AM,
       Anyone have a disposable HRO5 that might like to entertain a
trade on an FB7 ? Hmmmmmmmmmm?   73 de KS0F

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: jml@spider.lloyd.com (Jim Lockwood)
Subject: Re: Incredible
Message-ID: <m0ubF81-001Nd5C@spider.lloyd.com>

At 08:48 AM 7/2/96 -0500, Karan Lee Carruth wrote:
>
>On Tue, 2 Jul 1996, Andy Howard, WA4KCY wrote:
>
>> We are preserving part of our heritage. Our grandchildren will thank
>> us. (At least that is what I tell my wife when I bring another one
>> home).
>>
>>
>   YOUR WIFE BELIEVES THAT???????
>

Stranger things have happened.

My dear wife believes *me* when I tell her that I'm buying all these radios
for her.

She even comes into the radio room from time to time so I can show her which
ones she owns.

73,

Jim - km6nk

```
From boatanchors@theporch.com  Wed Jul  3 16:51:43 1996
From: rmorgan@us.edu (Robert Morgan)
Subject: Introduction
Message-ID: <19960703193333692.AAA163@slip2-15.cybergate.net>
```

I'm a new subscriber to boatanchors and I thought a brief intro was a good idea.

My good friend, the late Stu Stephens (K8SJ) and I started the Classic Exchange contest many years ago. I've been more or less inactive in Classic radio lately, but my interest re-emerges from time to time.

Stu's death last month and a mention of this list by his brother, Al, got me thinking about Classic Radios and boat anchors again.

For years I operated Radiographics Books and bought and sold old radio books. That business closed some time ago when responsibilities at my "real job" and family responsibilities made it impossible to continue. I still collect old radio books, although I've had to narrow my fields of interest due to space and time constraints.

I'm ready to sell some of my personal collection of books and magazines and will make some information available here soon.

In the meantime, here are my interests as of now:

Always looking for books and printed matter about Hiram Percy Maxim (founder of the ARRL) and other members of the Maxim family. In addition to Hiram's activities with ham radio, his family was fascinating.

I'm looking for a Kenwood TS-511s SSB transceiver circa 1971 or so. It was a sweep tube final transceiver which was one of Kenwood's earliest products. It was also sold previously under the Trio name. It's now certifiably an antique (25 years) and I'd say now a true boat anchor, even if it's a sideband rig.

73

Bob Morgan, K8RBV

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: jproc@worldlinx.com
Subject: Jackson Tube Tester
Message-ID: <Chameleon.4.01.2.960702194523.jproc@>

Dear BAer's,

Recently, I wanted to checked an assortment of tubes using a Jackson Model 658 transconductance tube tester. To my dismay, I discover that it won't test tubes like the 6J7,6K7,6K8, and 6Sxx series. When I analyze the roll chart, it seems that the device was designed primarily for TV tubes.

Does anyone have a copy of supplemental tube data for this particular unit? Willing to pay for repro costs.

Regards,
~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Jerry Proc VE3FAB
E-mail: jproc@worldlinx.com
Radio Restoration Volunteer
HMCS Haida, Toronto Ontario
~~~~~~~~~~~~~~~~~~~~~~~~~~~~

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: Peter Ferrand <petef@sprynet.com>
Subject: Kwick-Patch For Sale
Message-ID: <2.2.32.19960703013620.0074cad0@m3.sprynet.com>

I have a Kwick-Patch phone patch that I'd like to sell - not sure of the exact model number 'cause it doesn't match exactly the ones I've seen in the ads.

Front panel has the Amphenol single button 75MC1F mike connector and a three position rotary switch - positions are trans., receive, and off. Rear panel has L1 and L2 for the phone line, another Amphenol connector marked "speech" and a phono socket marked "rcvr". Original specs said the audio response was flat from 200 to 4000 cycles. This one's designed for AM operation.

In reasonable and presentable condition, but not collector quality. Don't have the manual but I can include a photocopy of the ER article which includes history, diagram, and operational instructions.

Price $35 + shipping from Nashua, NH

73 es tnx
-Pete
Petef@sprynet.com
WB2QLL
(603)889-1067

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
Subject: KWM2A ROUND, ETC FS

For Sale....KWM2A (round serial) 18k...516f-2, 312B-4, all near mint. $985.00 plus ship. Pse reply by email. (Prescot tAz.)

------ Forwarded message ends here ------

Dick Dillman
WPE2VT N6VS ex-WA2BJK
<ddillman@igc.apc.org>
Collector of Heavy Metal:
Harleys, Willys and Radios Over 100lbs.

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: don merz <71333.144@CompuServe.COM>
Subject: Literature For Trade
Message-ID: <960703234019_71333.144_DHB30-1@CompuServe.COM>

Radio Literature For Trade

CONTACT: Don Merz, N3RHT: 47 Hazel Drive, Pittsburgh, PA 15228.
412-234-8819 (weekdays, EST or leave a message anytime).
71333.144@compuserve.com

Thordarson Transmitter and Power Amplifier Guide #344, 1934 date. Excellent condition.
A.C. Gilbert "Boy Engineering," 1920. Catalog and stories including an Interview With Thomas A. Edison. Very Good condition.
Pilot's Radio Manual, 1940. Civil Aeornautics Administration Bulletibn #29. How radio works. How planes use radios. Specific, detailed instructions on using radio for air navigation and communication. Terrific! Excellent condition.
Military Army Air Forces TO 30-100A, -B and -F: Instrument Flying, Basic and Advanced. Dated 6/1/43. Includes a fair number of 2-color pages. Excellent and fun to read.

Military Army Air Forces TO 30-100C: Instrument Flying, Instrument
 Traininer. Dated 8/1/43. Companion to above volume, I think, for use
 with a "trainer" machine (simulator). Lots of instrument panel photos.
 Great stuff.

Any interesting trades considered. But I am specifically looking for the stuff listed below.

WANTED: MANUALS (originals preferred, photocopies okay unless noted)
- Supreme 189 Signal Generator manual copy (Model 589 is the same electrically)
- RCA WR-67A Test Oscillator manual
- Millen 90810 VHF transmitter manual
- Patterson PR-16 receiver manual
- Patterson PR-10 receiver manual
- RME-69 receiver manual
- Heath T-4 signal tracer manual
- Manual, schematic or any information needed about military power supply PP-4763/GRC made by Christie Electrical Corp. under contract # PAA807-67-C-0637. This is a 28VDC, 50 amp regulated supply.
- Swan 250C manual copy
- Swan NS-1 instruction sheet copy
- National SW-5 manual
- Military OBL-5 oscilloscope manual
- Manual or ad reference or any information about Carron Model CCA Audio Beat Frequency Oscillator. This small piece of test gear has a beautiful brown, gold and gray painted front panel. It uses 6 volt metal tubes and a 6U5 tuning eye. Any help with this one will be appreciated.
- Jackson Model 112 Condenser Tester schematic, Riders, or ??? Manual??
- Military TBX-6 manual. Will pay your price for an original (I already have a copy).
- Military AM-1249/U Audio Amplifier manual
- Hallicrafters HT-4B Manual. As close as I've been able to come to this one is a manual copy from an HT-4C. I'd love to have a real "B" manual though, even a photocopy.
- Millen 90881 500W Amplifier Manual

WANTED: REFERENCE LITERATURE
- Air Force Manual 100-5, Radio Receivers, 12/14/56
- AN 16-30ARC5-2: Handbook of maintenance instructions for model AN/ARC-5 aircraft radio equipment LF MF HF components, 23 february 1944, OR 15 june 1945 revision.
- JANAP 161 (military predecessor to the MIL-HBK-161)
- Army TM-11-227 (directory of radio gear) original (I already have a copy)
- Navy Bureau of Ships RADIO AND SOUND BULLETINS Number 1 through 18, any
- Navy Ships 275 Catalogue of Radio Equipment
- TM 11-387 Ground Radio Survey
- RADIO magazine, 1934 and earlier, January, 1936, or 1942 - 1946
- ELECTRONICS magazine, December, 1940 or a copy of the story on the

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   Westinghouse HR transciever in that issue.
  QST Magazine: 1921: All except 10,11
                1922: All except 7          1943: 6
                1923-27: any                1945: 1,2,8,9
                1928: 3,4,5                 1946: All but 12
                1940: 5,6,8,12              1948: All but 10,11
                1941: 1                     1950: All
                1942: 1,2,5,7,9,10          1953: 1,8
  Radio-Electronics: 11/51.
  Radio News: Any WWII issues with military cover photo.
  ARRL Handbooks: 1926, 1937, 1941, 1968, 1980 - 1984, 1986 - 1990
  AWA Review Volumes 2 and 5
  AWA Old Timer's Bulletin: Any issues from Volume 17 (1976) or earlier, and:
   Vol 18 (1977): Nos 1, 2 & 4        Vols 21 - 27 (1980 - 1986): Any
   Vol 19 (1978): Any                 Vol 30 (1989-90): 2
   Vol 20 (1979): Nos 2, 3 & 4        Vol 33 (1992-93): 1
  Any issues of the RCA Review
```

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: wb6zwc@ns.net
Subject: Meter protection
Message-ID: <199607022224.PAA19558@tomcat.ns.net>

There was a thread last year about protecting meters. It had to do with putting a couple of diodes "back to back" across the meter terminals.

1. What is the so called "back to back" configuration referring to?

2. Just any old diode or some special diode for this application?

3. Will it work for any meter no matter what it is monitoring?

I have five, three hundred dollar, meters that need good protection from my mistakes and other things that happen to meters electrically.
====================================
Wanted 312-B3
Richard@Sacramento,Ca.

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: Henry van Cleef <vancleef@bga.com>
Subject: Re: Meter protection

Message-ID: <199607032027.PAA17229@zoom.bga.com>

As wb6zwc@ns.net said
>
> There was a thread last year about protecting meters. It had to do with putting a couple of diodes "back to back" across the meter terminals.
>
> 1. What is the so called "back to back" configuration referring to?

A pair of current-carrying rectifier diodes, one in each direction, across the meter terminals. In normal operation, the voltage across the meter terminals is not high enough to place either diode in conduction. On overload (generally 200-300%) one of the diodes will conduct, holding the voltage across the meter terminals (and the current through the meter) at a constant value. For circuits such as in a VOM, which may get several thousand percent overload, also include a small fuse (250 or 500 ma). It won't open immediately on overload, but will open fairly quickly on substantial overload, limiting the number of joules (that's "heat") dissipated in the meter and protection circuit.

>
> 2. Just any old diode or some special diode for this application?

Depends on the meter. The typical tube radio S-meter ranges from 50 to 500 microamps full scale, and generally has a resistance in the coil such that full scale deflection gives 200-300 microvolts across the terminals. A pair of 1N4005's (I bought 100 of them, so they are my "standard rectifier diode) connected either way across the terminals makes fine protection. 1N4001's would work just as well----the maximum PIV is only around 650 mv. with the diodes in full conduction with lots of current. 20K ohms/volt VOM meters are 50 microamp, typically 900 to 1800 ohm coils. The protection won't kick in until you hit between 250 and 500 microamps through the meter; however, this is enough to prevent coil burnout on overload.

>
> 3. Will it work for any meter no matter what it is monitoring?

Not necessarily. Some precision meters have very low internal resistance, and silicon diodes won't begin to conduct until you've got several thousand percent of overload. These meters often will sustain physical damage if you overload them that much. Germanium diodes begin to conduct at about 180 mv., but the only commonly-available ones are signal diodes, like the 1N34A, which really won't conduct enough current to blow a small fuse.
You can get current-carrying germanium transistors from replacement operations like NTE and use the base-emitter junction as a current-carrying silicon diode. However, a lot of these replacements are rather leaky, and you'll have to check their effect on meter operation. Simple enough to do---just deflect the meter full scale

electrically, hang the diode across it, and see what effect, if any, it has on the indication. The ideal situation is "no effect."

>
> I have five, three hundred dollar, meters that need good protection from
> my mistakes and other things that happen to meters electrically.

You'll have to check the meter characteristics and devise accordingly.

To measure a meter's internal resistance, don't just slap an ohmmeter across the terminals. VOM and small VTVM 1.5 volt battery-powered ohmmeters expect the circuit under test to carry far too much current on the low ohms scales (150 ma. or more for a VoltOhmyst on X1 ohms). Use a high range (make sure the range chosen uses 1.5 volts) and reduce the range until you get full scale deflection on the meter under test and measure the voltage across the terminals. An HP 412A can be very handy here, as its ohmmeter is referenced to the 1 mv. voltage scale, and currents are much lower. Most VOM's and small VTVM's use a series/shunt resistance combination that provides an effective source resistance at the ohmmeter terminals of 1/2 scale meter deflection, referenced to the ohmmeter battery (typically 1.5 volts). This is the "10" position on most meters---thus, a WV98C VoltOhmyst puts about 150 microamps from the 1.5 volt battery through 10K on the 10K ohms position.

--
****
Hank van Cleef vancleef@bga.com vancleef@tmn.com
****

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: paul Veltman <veltman@netcom.com>
Subject: Misc stuff for sale
Message-ID: <Pine.3.89.9607022115.A8645-0100000@netcom18>

Hey gang,
Help me clean out my garage. I'm tired of this stuff hanging around.
Pickup only, SF Bay Area, Make Offer.

Tek 535 with plug ins CA,B,D, Hickock 1832 and cart
Old Audio osc - probably navy, no name plate
HP Slotted Line
Dana 5500 DVM
SG24-TRM3
450 MHz repeater with extra strips.
Misc box of parts

73

Paul WA6OKQ

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: Spencer Petri <spetri@e-tex.com>
Subject: Model 19
Message-ID: <m0ubbKC-0002fJC@e-tex.com>

Ah, there is a real boatanchor, the table must have weighed 150 lbs. Finally ran out of space in the shack, rolled it down the steps and unceremoniously deposited it in the dump. That was years ago.

73 de Pete WA5JCI

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: "Andy Howard, WA4KCY" <102452.362@CompuServe.COM>
Subject: Model 33 Teletype
Message-ID: <960704024013_102452.362_DHT67-1@CompuServe.COM>

Since the group is on the subject to teletypes I thought that I would throw in the following:

I have a Model 33 with tape perforator, two extra keyboards, perforator tape, rolls of paper, etc. that I will give to somebody who wants a vintage teletype and does not want to take it to the dump.

It is in very good condition and you can have a great time with it by adding the bell punch code, and carriage return, etc. and put that on a tape loop and let it run around and around.

Whoever said that the Model 28 was the zenith of teletypes has my wholehearted agreement. Wow! As compared to the Model 15 and 19 is was like comparing a go-cart to a Cadillac. Loved the shift lever to change baud rate. Don't suppose there is any 850 hertz shift left on the airwaves. When I was in the Signal Corps we got all the news from UPS, AP and others right off HF and onto the teletypes. We also had the great looking facsimile machines that were discussed here a while back. Don't know if they would transmit and receive anything other than the centerfold of Playboy or not. At least we never tried to find out. Soldiers will be soldiers.

Regards to all,

Andy Howard, WA4KCY
AMI #9

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: "Allan Fritsche" <fritsche@msn.com>
Subject: Model 37 Not the last for Teletype
Message-ID: <UPMAIL03.199607032333100572@msn.com>

Hello all, someone wrote today that the model 37 was the last unit built by Teletype corp. We used Model 43's in the Bell System up til the early 80's. Slow, Slow, Slow.More typewriter then Teletype. BTW, I think I got one up in the attic wrapped in a green trash bag. I think I will look as soon as it gets below 200 %'s up there.
See Ya Guys
Al
fritsche@msn.com

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: Bill Strangfeld <bstrang@iac.net>
Subject: model 37 teletype
Message-ID: <Pine.SUN.3.91.960703135852.10137A-100000@little-miami.iac.net>

I was given a model 37 teletype in nice shape. Are these useable? A friend thinks there was something unusal about them that made them hard to use, but he can't remember what. Did any CQ or QST articles cover them?

Thanks and 73
Bill Strangfeld
bstrang@iac.net

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: John Shriver <jas@shiva.com>
Subject: Re: model 37 teletype
Message-ID: <199607032008.QAA05446@shiva-dev.shiva.com>

If I remember right, they are upper/lower case ascii (nice, but not the baudot that has been common for ham rtty) at 150 baud (rather unusual rate).

Running at 13.6 cps is really hard on the guts, since it's just model

33 with a bigger type cylinder and nicer styling. The model 33 only ran at 110 baud (10 cps).

It was the original canonical UNIX terminal at AT&T in the early 1970's. Not that common, I think AT&T was the primary customer.

No idea if it's current loop or RS-232 interface.

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: Karan Lee Carruth <klccarru@tenet.edu>
Subject: Re: model 37 teletype
Message-ID: <Pine.OSF.3.91.960703154240.1114B-100000@beall.tenet.edu>

If my memory serves me correctly, this was about the last model machine that the Teletype Corporation buitl. I don't remember exactly what they looked like but I seem to remember that the top cover was very stylish and black or someother dark color.

It is probably and eight-level (ASCII) machine instead of five-level (Baudot). I have not been on the air with teletype for a long time but I think that hams still use the Baudot system. Of course, you could build a s***d-state ASCII to Baudot converter and vice versa and use it.

I think that this was a heavy-duty machine suitable for 24 hour-a-day operation. Your wife will love that!! Trust me, I know!!

Lenox, WA5OVG
klccarru@tenet.edu

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: w5tvw@juno.com (Sandy Blaize)
Subject: Re: model 37 teletype
Message-ID: <19960703.162733.9103.3.W5TVW@juno.com>

Hello All,

On the subject of "old" teleprinters.....my all time favorite was the venerable model 15 and its derivatives (model 14, 19 etc.)

It's slow but at 60 WPM they are like the Eveready bunny, they go.....and go.....and go......and go!

The best of the mechanical designs, IMHO, is the model 28. They survived for a long time when they were long obsolete!

Kleinschmidt made some machines, BUT....I think the 15's and 28's are head an shoulders above everything else. Opinions anyone?

73,

Sandy Blaize, W5TVW
Boat Anchors collected, restored, modified, traded & used!
w5tvw@juno.com
417 Ridgewood Drive,
Metairie, LA., 70001.

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: Norm Flasch <flasch@cushy.eecs.nwu.edu>
Subject: Re: model 37 teletype
Message-ID: <199607032214.RAA02467@cushy.eecs.nwu.edu>

There was a model 14 here in reasonably good shape that was destined for the dumpster. Hand crank on one side and paper tape on the other. It sounded just fine. I remember that most if not all AM radio stations had them running in the background during newscasts, probably into the 70's. Man, this was a heavy two man operation. I gave it to a Mr. Kleinschmidt who is the grandson of the original inventor.

--
Norm Flasch   flasch@eecs.nwu.edu   Northwestern University
Electrical Engineering and Computer Science

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: "Joseph W. Pinner" <kc5ijd@dns1.net-connect.net>
Subject: Re: model 37 teletype
Message-ID: <199607032251.RAA17238@dns1.net-connect.net>

>   Kleinschmidt made some machines, BUT....I think the 15's and 28's
>are head an shoulders above everything else. Opinions anyone?

My personal favorites were the Mite Corp machines - not that they were so good, but quite interesting. I also had some Kleinschmidt stuff, a page printer and a TD/Reperf.

Use to watch the AP and UPI news roll in using a URA-8 demod. That was a real thrill!

73

Joseph W Pinner
Lafayette, LA
KC5IJD
EMail: kc5ijd@net-connect.net or kc5ijd@aol.com

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: Karan Lee Carruth <klccarru@tenet.edu>
Subject: Re: model 37 teletype
Message-ID: <Pine.OSF.3.91.960703174944.8233A-100000@beall.tenet.edu>

Well, I'd have to vote for the Model 28. I always thought that was the high point of TTY design. Things went downhill with the 32s and 33s. The Model 15 and derivatives were great old machines but the mechanical design of the 28s was far superior. I loved the little nylon geashift that gave you three speeds. At that time you could copy anything with three speeds. I had a Model 34ASR and a 34KSR. Loved them but then most RTTY left the airwaves and there was not much to do with them.

The KSR was set up to decode on my call sign or any of several popular weather reports including the hurricane reports. Tracking hurricanes "straight from the horse's mouth" was interesting. At that time, you could get hurricant tracking charts from the WX bureau.

I had some Kleinschmidts but never really liked them near as much as the 28s. The Mite's were cute and small but hard to get decent print from them. I had a field model once that was in a fiberglas case. That was kinda neat. Waterproof with the cover on as I remember.

Ah, the memories.

Lenox, WA5OVG
klccarru@tenet.edu

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: Karan Lee Carruth <klccarru@tenet.edu>
Subject: Re: model 37 teletype
Message-ID: <Pine.OSF.3.91.960703180132.8233C-100000@beall.tenet.edu>

P.S. on the Teletype stuff - I had a friend whose machine was running when JFK was shot. I think that I still have a tape of it that he gave me around here somewhere. Boy was that a heart stopping message - bells and all.

Lenox, WA5OVG

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: John Kolb <jlkolb@cts.com>
Subject: Re: model 37 teletype
Message-ID: <Pine.SCO.3.91.960703180450.27661A-100000@sd.cts.com>

On Wed, 3 Jul 1996, Karan Lee Carruth wrote:

>
> P.S. on the Teletype stuff - I had a friend whose machine was running
> when JFK was shot. I think that I still have a tape of it that he gave

I was on watch as a Commander Seventh Fleet Radioman in the early 60's when the msg came in that the Maddox and Tuner Joy had been attacked. Around 1:00 in the morning, a message than went something like -- Bells, "FLASH We are under attack " then the msg stopped for close to 10 minutes before finishing. I've never seen so much brass crowd into a radio room.

John Kolb   KK6IL jlkolb@cts.com

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: Scott Robinson <spr@earthlink.net>
Subject: More about fuses
Message-ID: <31DB15C5.5C01@earthlink.net>

Folks,

Yet another fuse wrinkle: yo've all seen the little 5mm X 20mm fuses that are common in new gear nowadays. These are originally a European standard. They are available in the usual kinds of ratings plus slow/fast choices, but there's a difference in metric and AMericna fuse rating methods.

In one case, the rated current is the maximum the fues will reliablay carry; in the other, it's the minimum that weil reliably blow the fuse in a stated period of time. The result of this rating method difference is about 25% of the fuse rating--that is, a 1 A fuse of one type is equivalent to a 1.25 amp fuse of the other. I think it's the American fuse that needs to have the higher rating for equivalent results, but I can't at the moment put my finger on the book I need to confirm this.

Mostly this doesn't matter to us, except if someone has converted something. Then it's worth knowing.

Yours for true protection but no niusance fuse blowing,

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: Scott Robinson <spr@earthlink.net>
Subject: Ni ceness
Message-ID: <31D9C5A7.4D7@earthlink.net>

Folks,

The point here is not whether, as Jeffrey Herman pointed out, no fear (phobia) is involved. the point is that applying unkind labels to any group of people is not what I wish to participate in, nor does it belong in this mailing lists activities.

Hate speech poisons all it touches, including the speaker. And no, I am not gay.

Regards,

scott robinson
spr@earthlink.net

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: paul Veltman <veltman@netcom.com>
Subject: Re: Ni ceness
Message-ID: <Pine.3.89.9607021957.A5929-0100000@netcom23>

>
> The point here is not whether, as Jeffrey Herman
> pointed out, no fear (phobia) is involved. the
> point is that applying unkind labels to any group
> of people is not what I wish to participate in, nor
> does it belong in this mailing lists activities.
>
> Hate speech poisons all it touches, including the
> speaker. And no, I am not gay.
>

Well I read the original post again, and maybe I'm missing something, but I don't see where the writer singles out any particular group by name or definition for ridicule. Maybe you'd like to point this out to everyone. And what I really don't see is why that entire post didn't just die without comment rather than create all this venom.

73

Paul WA6OKQ

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: "Lahlum-FLR111 Ross" <ross_lahlum@msmail.wes.mot.com>
Subject: Nice - let it go!
Message-ID: <9607030740.AA05582@kay.wes.mot.com>

IMHO the reaction to that post has created too much noise!
Can we let it go & get back to what we are all really interested in?
Unless the problem gets out of hand, the best response is no response.
This is not a forum for debating political correctness.

Thanks,
Ross

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: Noise Measurement
Message-ID: <59932.ddillman@igc.apc.org>

Long time readers of the list may remember my whining messages about the high noise level at my QTH. There's HV distribution line nearby so I don't expect it to be dead quiet, but in the last two weeks the noise level has increased by two or three times (up to 30 or 40 on the R-390A "S" meter). I've called the utility company's RTVI department and hope for assistance from them, but I thought it would be useful to have a log of the noise level as it does occasionally disappear.

Has anyone ever rigged up a chart recorder or other device to give a 24 hour record of signal (or, in this case, noise) level?

I've thought of a couple of ways to do this - measuring AVC voltage, measuring audio level, etc. - but I was wondering if anyone has actually done this so I won't have to re-invent the wheel. If anyone has, please share your wisdom with me.

Dick Dillman
WPE2VT N6VS ex-WA2BJK
<ddillman@igc.apc.org>

Collector of Heavy Metal:
Harleys, Willys and Radios Over 100lbs.

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: jmiller@teleteam.net (Jay H. Miller)
Subject: Re: Noise Measurement
Message-ID: <v01510100adff176571f8@[199.34.24.9]>

Dick-
I suffer the same problem here in Dallas. We live in an old neighborhood (circa 1929) with many remodeled homes and lots of central air conditioning. My noice level on 40 meters during the day is usually S9 at lease. If not for the Timewave DSP I could not make regular 40 meter skeds.

I assume you have gone the route of shutting off individual circuit breakers at the main panel to be absolutely sure there is nothing *local* causing the interference. I did this last summer and found a ceiling fan to be the culprit for one noise component.

I called our local light company and got no response to my plea. This was before our local radio club found out they were blaming some interference on *ham radio operators* and we went to the VP of operations and got that nipped in the bud. He said he would do anything he could to help us out if we had problems.

I use a Heathkit monitor scope connected to the IF of my 75S-3C and it sure paints a telling picture of the interference. Perhaps a videotape of the scope and an audio track would be helpful (be sure to hit the date/time stamp).

Good hunting!

************************* ########################### ********************
Jay H. Miller, KK5IM   Dallas, Texas
The Pocket Guide to Collins Amateur Radio Equipment
jmiller@teleteam.net
************************* ########################### ********************

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: Jeffrey Herman <jherman@hawaii.edu>
Subject: Re: NOT NICE
Message-ID: <Pine.GSO.3.93.960702091655.13883B-100000@uhunix5>

On Tue, 2 Jul 1996 JOHN_SEHRING.parti@ecunet.org wrote:

> IMHO, this kind of homophobic crap does not belong on this or any other
> *civilized* net.

False labels doesn't belong on here, John. There are those of us who find the activities of this 2-4% of the population nauseating; it has nothing to do with fear (= phobia).

Still looking for a *cheap* source of 6LB6 finals for my Galaxy GT-550.
Also, the xtal calibrator would be nice to have, too!

Jeff KH2PZ / KH6

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: "Benjamin D. Hall" <bdhall@ghgcorp.com>
Subject: Not nice
Message-ID: <31D9B7FF.2C7@ghgcorp.com>

(name of original party deleted, you know who you are)

> Simple. It was pride. Tubes are strong, macho tough guys
> who can take a little voltage surge and laugh. Try that
> with those wimpy, pansy-ass sandbox weinies and see
> what happens. Did you see anyone with a tube radio or
> 813-powered bull horn marching in all those guy-pride
> parades?? NO! But there were all kinds of silly-cone
> boxes out there. Ha! What's that tell ya?

It tells you these folks are practical people who are not going to waste energy lugging around heavy equipment when the job can be done better and more efficiently with solid state.

They were marching in a parade for goodness sake.

Your comments are out of line.

-Ben

```
--
===================================================
+         Benjamin D. Hall, Houston Texas         +
+  BDHall@GHGCorp.com   BHall@GP802.JSC.NASA.gov  +
===================================================
```

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996

```
From: "Andy Howard, WA4KCY" <102452.362@CompuServe.COM>
Subject: RE: NOT NICE
Message-ID: <960703014517_102452.362_DHT104-1@CompuServe.COM>


While I certainly have a definite opinion as to the subject being discussed, it
is my opinion and shall remain so unless I decide to communicate with someone on
the list personally. It should be the same for all concerned.

Regards,

Andy Howard, WA4KCY
Carrollton, Georgia
Christian, Republican, Machine Gun Collector (need anything else to know where I
stand?)




From boatanchors@theporch.com  Wed Jul  3 02:43:00 1996
From: "Benjamin D. Hall" <bdhall@ghgcorp.com>
Subject: Re: Not nice
Message-ID: <31D9D74E.3410@ghgcorp.com>

Jim Lockwood wrote:

> >Your comments are out of line.
>
> Ben, I'd suggest that you deliver your message of disapproval privately.  It
> no more belongs on BA than does any anti-<anyone> message.

Hello Jim and list.

You are absolutely correct.  I apologize for sending out my note of dissaproval
to the list.  I will hold my "send button" in the future.

Sincerely,
Ben
--
===================================================
+         Benjamin D. Hall, Houston Texas         +
+  BDHall@GHGCorp.com   BHall@GP802.JSC.NASA.gov  +
===================================================




From boatanchors@theporch.com  Wed Jul  3 16:51:43 1996
From: Henry van Cleef <vancleef@bga.com>
Subject: Re: NOT NICE
```

Message-ID: <199607031952.OAA11679@zoom.bga.com>

As JOHN_SEHRING.parti@ecunet.org said
>
> To: boatanchors@theporch.com
>
> > Date: Tue, 2 Jul 1996 04:47:15 -0700
> > From: arc5@ix.netcom.com (David Stinson)
> > Cc: Boatanchors@theporch.com
> > Subject: Re: BC348 Questions
> >
> > Simple. It was pride. Tubes are strong, macho tough guys
> > who can take a little voltage surge and laugh. Try that
> > with those wimpy, pansy-ass sandbox weinies and see
> > what happens. Did you see anyone with a tube radio or
> > 813-powered bull horn marching in all those guy-pride
> > parades?? NO! But there were all kinds of silly-cone
> > boxes out there. Ha! What's that tell ya?
>
> IMHO, this kind of homophobic crap does not belong on this or any other
> *civilized* net.
>

Well, I ignored the original, because I thought it was rather meaningless. Calling it "homophobic" sounds to me like stretching the original to ridiculousness. It does raise the fur on my back when someone tries to stretch a posting here so far out of context and then use "political correctness" on it. Electronics, whether vacuum tube, solid state, or hybrid, has nothing to do with either homosexuality or race, so we can just knock off all the "homophobic" and "racist" critiques of postings right here and now.

I doubt that you'll ever see anyone marching with an 813-powered bullhorn today. It would require a pickup truck with a jeep generator along with the bullhorn, and add a few cables and boxes of equipment. You would not have seen such a thing forty or fifty years ago, either.

Playing with vacuum tube equipment is fun and makes a fine hobby. But claiming that vacuum tubes are the be-all and end-all of anything is sheer nonsense. From a personal perspective, I got paid many years' salaries for transistorizing vacuum tube circuits. The results were always superior performance and reliability, dramatic reduction of power consumption and waste, and miniaturization of size and weight, and this was true long before the common use of etched circuit boards, integrated circuits, or surface mount technology.

Since I am not a ham, I am not going to get into ham radio issues, other than to make the observation that I've felt that a lot of ham radio has been very slow to recognize the value of solid state technology as a basis for doing "homebrew" technical work, and have some question as to the commitment of ham organizations to building skills working hands-on with the technology these days. The latter topic dominates most of the rec.radio.amateur newsgroups, and this is not a place where I am going to discuss it.

As a practicing engineer, I've worked with solid state technology since the 1950's, and that is the core of any EE's work today---has been for a long time. While the primary focus of this mail list has been on vacuum tube electronics, some of the early solid state stuff is very interesting (aside from very obsolete) and fairly easily rebuilt to first class electronic equipment. Plus some of the items of test equipment we discuss here are chock full of semiconductor devices.

People come to this mail list for a variety of reasons, one of which is to find technical support from people who understand older electronics technologies. Virtually all of the people who can give that support have plenty of experience with transistors, IC's of various types, and all of the issues surrounding working with them. If you prefer vacuum tubes, and working within their limitations, fine, it's a free country. I can go along with a primary focus in this mail list being on vacuum tube equipment, although for me it is much more a nostalgia trip and a reacquaintance with some very severe limitations. I have and use solid state stuff here that is vastly superior to its vacuum tube predecessors, and would rather fight than switch.

So far as designing and building an 813 audio amplifier (which is much too big for a portable bullhorn), I'd much rather use some 2N3773's, and would expect far less trouble getting the design up and running using the transistors than with the 813. It still wouldn't be a portable setup, simply because of the power required to get 300 watts out of anything---the difference would be more like dropping from 3Kw of primary power to under a Kw. A ten watt bullhorn amplifier might be a little more appropriate, and coming up with one that is small enough and light enough to be carried by someone marching is an afternoon's task using solid state devices. Not so easy using vacuum tubes.

--
****
Hank van Cleef vancleef@bga.com vancleef@tmn.com
****

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: Jeffrey Herman <jherman@hawaii.edu>
Subject: Re: NOT NICE
Message-ID: <Pine.GSO.3.93.960703103553.10034B-100000@uhunix5>

Regarding solid vs hollow state, I must say that I am disappointed to realize that certain SS devices that appear in the 60s QST and ham projects books are no longer available. The "fast" obsolescence that seems to accompany these devices can be hell on one's pocket book (case in point: A Bearcat scanner built in the late 70s had to be trashed due to a custom-made IC being no longer available). You as a professional can speak of the marvels of SS devices, Hank, but me as "amateur" will always feel a bit distainful of such items. Do I live in the past? If so, big deal. This is a hobby not a profession for me. If a radio breaks I want to be able to fix it myself knowing that the parts are out there somewhere no matter what era that radio was built. The ability to meet this simple criteria equates to BA gear.

Jeff KH2PZ / KH6

P.S. I've got another inoperative scanner here on the bench Hank - if these fully IC'd radios are so wonderful, please tell me how to fix the dang thing without resorting to an electron microscope to see the itsy bitsy components. ("Send it back to the shop for repair" is the 1990s amateur's proverb.)

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: "Andy Howard, WA4KCY" <102452.362@CompuServe.COM>
Subject: Protecting meters
Message-ID: <960703154741_102452.362_DHT51-1@CompuServe.COM>

Hi Gang,

I read with interest the post about needing protection for $300 meters. Think that there was 5 of them. The best protection for $1500 worth of meters would be to put them in a safe deposit box. Must be broadcast transmitter meters. I heard that they were very expensive, especially the large ones.

Andy, WA4KCY
AMI #9

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: bill@skeeter.frco.com (William Hawkins)
Subject: Re: Protecting meters
Message-ID: <9607031728.AA27340@skeeter.frco.com>

Andy's got the right idea. All we really know about those meters is that they're expensive. Back-to-back diodes works for the usual ten milliamp or less full scale D'Arsonval permanent magnet moving coil meter, but it wasn't clear that that's what the poster had. What does each meter measure, and what makes them so expensive? Big diamond pivot jewels? Radioactive isotopes to make 'em glow in the dark? Scales by Gucci?

Bill Hawkins bill@skeeter.frco.com

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: Eugene Rippen <soundval@foothill.net>
Subject: Radio and Radio Handbook
Message-ID: <31D9EF49.4D98@foothill.net>

Here is some Radio Magazine and Radio Handbook history that I got from a very good source, namely the former editor.

The history begins with R-9 magazine in about 1930 in Southern California, published by The Spanish American Institute.
R-9 was bought by Killian Lansingh about 1933.

About 1933 Radio began in San Franscisco by Frank Jones and Henry (Hank) Dickow. About a year later they began publishing the Radio Handbook.

About 1935 Lansingh bought Radio Magazine, immediately merging it with R-9, and then
about a year later he bought the Radio Handbook. When he bought the Radio Handbook, Ray Dawley became the editor of both publications and remained so until December 1941, when he entered the armed forces. The last issue of Radio was published in January-February of 1942, after Dawley had left. The other main man, Woody Smith, left for war in January 1942.

There was no publication ever again of Radio. The name and mailing lists were sold about 1945, but apparently no attempt was ever made to publish Radio as a magazine thereafter.

Ray Dawley returned after the war and was the editor of volumes 10, 11, 12 and 13 of the Handbook, until Lansingh sold it to SAMS about 1952, and Dawley went on to manage an electronics manufacturing company. Lansingh never published another radio magazine after February 1942.

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: John Shriver <jas@shiva.com>
Subject: Re: Radio and Radio Handbook
Message-ID: <199607031401.KAA23771@shiva-dev.shiva.com>

>From locis.loc.gov (Library of Congress), there appear to have been

many "Radio" magazines. The one I was talking about is (reverse time order):

2. LCCN: 93-660576 ISSN: 0275-3804
   Audio engineering. Orange, Ct. : Radio Magazines, Inc., c1947-c1954.
   Vol. 31, no. 3 (May 1947)-v. 38, no. 2 (Feb. 1954). Monthly
3. LCCN: 93-660575
   Radio (San Francisco, Calif.) Radio. San Francisco, Calif. : Pacific
   Radio Pub. Co., -c1947. Began with v. 3 in Nov. 1921. -v. 31,
   no. 2 (Feb./Mar. 1947). Monthly
   LC CALL NUMBER: TK6540 .R17
4. LCCN: 93-660574
   Pacific radio news. San Francisco : Pacific Radio Pub. Co., c1917-c1921.
   Vol. 1, no. 1 (Jan. 1917)-v. 3, no. 3 (Oct. 1921).
   LC CALL NUMBER: TK6540 .R17

However, when I look up the Title "R 9", I get item 3 above.

There must be other publications, possibly that never got into the Library of Congress?

The Radio magazine copies I've seen from the 1940's have a B&W cover, with a photograph, with the two 2" being a colored stripe having the Radio logo (the tail of the R underlining it all) in white. The color of the stripe varied.

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: don merz <71333.144@CompuServe.COM>
Subject: Radio Mag & Rack Hdw
Message-ID: <960703013124_71333.144_DHB53-10@CompuServe.COM>

IMHO, Radio Magazine of the 30's was the class of the business. QST of the 30's is great but RADIO is an absolute knock-out. I eveolved from Pacific Radio News
News and one other publication. During the 30's it absorbed R9 Magazine which was failing. Radio had a lot of "west-coast" in it, published in San Francisco ano
and the only magazine that I ever heard of that took off 2 summer months each year for a little R&R (surfing, no doubt). RADIO was bought by CQ in 1946 and split into the Audio Engineering magazine already mentioned in another post. But CQ kiled the radio side of RADIO. A terrific loss.

The rack hardware I use is General Cement 10-32 x 1/2" "Rack and Cabinet Screws." These are oval head types and come in a box of 144. The GC part number is 8848-G. The little "ring" that you need to use this screw is GC part number 6163-G "Cup Finishing Washer--No. 10." This also comes in a box of 144. Both items are nichkel-plated steel.

73, Don

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: Eugene Rippen <soundval@foothill.net>
Subject: Radio Mag. reply to J. Shriver
Message-ID: <31DA8871.4F10@foothill.net>

Yes, John, we appear to be talking about the same Radio magazine.

In addition to Radio and Radio Handbook, Lansingh published Radio Digest about 1937. He also published a magazine on Square Dancing.

Its like car and radio manufacturers, there have been so many different radio magazines that most of us have only heard of a small share of them, let alone actually seen them. For instance: The Radio Engineer, Radio Engineering
All-Wave Radio, Short-Wave Radio, Succesful Servicing, The Oscillator,
Western Radio Amateur, Experimental Wireless, The Wireless Age, Radio Age,
Radio Design, and Television News are just a few that I have some samples of.
I bet there was many times that of magazines on radio that started and stopped after
just a few issues.

Radio was a fast moving business, particularly in the 1920's to mid 1930's.
Like the computer business now.

By the way, I agree that Radio magazine was superior to QST, when you remove all of
the ARRL club info from QST. But then lots of folks are interested in the the club/contest data, or they would not have stuck to publishing it all these years.

Gene, WB6SZS

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: lkayser@rideau.net (Larry Kayser)
Subject: Radio Magazine
Message-ID: <199607030053.UAA23201@mail.peterboro.net>

No comment on the choice of QST over Radio as the survivor, an opinion I do not think much of myself. Radio did survive, you just don't recognize it I think.

Radio became Radio & TV News after the war and that migrated to Radio and Electronics when it was melded with the Electronics magazine that started in the very late 50's or early 60's. My memory on this is not so good, it was never something that I was keen on myself.

Radio did publish a lot of firsts outside of amateur radiothey had a good business but it kept changing on them and they seemed at times to have a hard time keeping up with the times. There was a w9egq, Herb I think, who wrote for them for a long time, great stuff he wrote.

Can someone else add more to this?

Larry
va3lk / wa3zia

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: "Allan Fritsche" <fritsche@msn.com>
Subject: Radio World
Message-ID: <UPMAIL03.199607030122460974@msn.com>

Got exactly one copy of Radio World, Circa Sept 1935, is this the rag that everyone has beeen talking about. Dam good articles in this one.

Thank God I didn't get involved in the parade talk?

See Ya Friends
Al
fritsche@msn.com

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: don merz <71333.144@CompuServe.COM>
Subject: Radios Maybe For Sale
Message-ID: <960703193557_71333.144_DHB45-6@CompuServe.COM>

Circumstances may force me to sell some serious radios here shortly. If you would be interested in any of the radios below then you should e-mail me with your interest. I need the money so I will be looking for best offer on these. I cannot guarantee that I will sell them but it appears quite possibly necessary. And soon.

75A4, matching speaker and the 3 best filters for CW, SSB and AM. Original manual. Spinner knob/reduction drive. Rebuilt by Howard Mills 2 years ago using Peter Dahl power transformer.

SX-62B. Beautiful inside and out. All tubes original Hallicrafters brand except one. BFO not working. Otherwise this will give your SP-600 a real run for its' electrons.

HQ-110/VHF. Like brand new. With matching speaker and original manual.

Excellent performer but advancing q-mult control too far causes oscillation.

The following are in lesser condition:
AF-68/PMR-8/M-1070. The class of AM & SSB mobile al la 1960. Unworking but looking excellent. Original manuals.
Gonset G-76. Looks and works great. Trouble is the AC and DC supplies both don't work at all. Includes DC cable and manual copy.
SX-71. Excellent looking. RF section works great. Audio section is dead.
AN/URM-25F signal generator. Looks and works good. Many accessories missing.

Thanks.
Don, N3RHT
71333.144@compuserve.com

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: jproc@worldlinx.com
Subject: Re; BC348 Questions
Message-ID: <Chameleon.4.01.2.960703000222.jproc@>

Thanks to all of those individuals who provided some commentary about the BC 348. I wasn't aware that the dymnamotor inrush current was so heavy, therefore a 28 volt 10 amp supply makes sense. Now to search for parts in 'ye ole junke box'.

Regards,
~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Jerry Proc VE3FAB
E-mail: jproc@worldlinx.com
Radio Restoration Volunteer
HMCS Haida, Toronto Ontario
~~~~~~~~~~~~~~~~~~~~~~~~~~~~

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: "F r6fqHo!ht" <75121.100@CompuServe.COM>
Subject: SX-99
Message-ID: <960703114343_75121.100_FHI45-2@CompuServe.COM>

Hi all!
I have recently acquired the above receiver, and it looks a little worse for wear.   I have no idea what it should look like, (color) but it is all black, painted with a paint brush, the panel in front, between the 2 large dials is a dull silver color, also paint with a brush (this also is streaked and runny looking) but the labels and know identifiers and or appear to be put on

with the type of lettering that is put in water first and then slid onto the surface. I forget what this called, perhaps the panel was labeled some other way. Whatever the procedure was, needs to be done again as many of the names are only partially there. There are also a couple knobs missing.

1. Anyone have a manual that can be copied? Will pay usual copy costs. Perhaps this unit is common enough that I can get a book from W7FG.

2. Where might I get a couple of the smaller knobs? Anyone have a parts unit or better yet, the knobs might more common between models.

Regards from Hawaii,
Raymond J. Cote

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: rjordan@overlord.dmv.com (Rick David Jordan)
Subject: Technical Book Mail List Questions
Message-ID: <199607022135.RAA10438@overlord.dmv.com>

Does anyone know if a list exists solely for the purpose of buying, selling or trading old electrical/electronic text i.e. old engineering textbooks, radio/TV/electronic books, magazines, catalogs,etc? If so, could you supply further information. I see a lot of posts in some of the usegroups, for books, but have never seen any information on a list devoted to this type of collection activity.

If not.........

I am the technical director for a television station who also is an internet service provider. My system admin folks have prepared a list server that could provide this service. We have 2 T1's direct to the net, and plenty of server space. If there is interest in this type of a list, please let me know.

It is NOT my desire to compete in ANY way with this list, and want that known by all upfront. I collect old radio/tv/electronic texts, and am always scrounging around for such. I have talked with another list member who also thought it might be a good idea. This list would be just for BOOKS/MAGAZINES/CATALOGS that relate to our electronic hobbies. I don't want to limit it to tubes only, since looking through the latest Antique Radio Classified shows a lot of interest in sand state - and a lot of the old books on this subject are extremely interesting.

If no other such list service for books exists, I would be willing to give it a go; but I need the ideas and advice from as many people as possible. If you feel this would be in conflict with the purpose of this list, let me know that too; I have no desire to create problems.

Thanks

Rick Jordan, Chief Engineer
WBOC TV
1729 N. Salisbury Blvd
Salisbury, MD 21801
(410) 749-1111 Ext 452

From boatanchors@theporch.com Wed Jul 3 22:16:48 1996
From: Morris Odell <morriso@vifp.monash.edu.au>
Subject: Theremin
Message-ID: <199607040246.MAA16034@vifp.monash.edu.au>

Hi all,

I was thinking about building a Theremin and seem to remember seeing a circuit for one using vacuum tubes many years ago. I wonder whether anyone here remembers anything about them or might have a circuit ferreted away somewhere.

73

Morris Odell VK3DOC   Melbourne, Australia
morriso@vifp.monash.edu.au
http://www.vifp.monash.edu.au/CFM/staff/mo.html
Waffling for myself and not my employer.....

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
From: Spencer Petri <spetri@e-tex.com>
Subject: Tube Book
Message-ID: <m0ubH23-0002f7C@e-tex.com>

Hey Gang,

An interesting book followed me home tonight from the local ham club meeting. A tube (valve) book which has specs for European tubes. Keep me on your list and maybe I can lend a hand when you come up against a type you can't find.

73 de Pete WA5JCI

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: midshires@cix.compulink.co.uk (Andrew Emmerson)
Subject: Tube letter designations
Message-ID: <memo.750230@cix.compulink.co.uk>

This is a huge subject: what you're discussing is the RMA or RETMA code but of course there are dozens of manufacturers involved.

Anyway, as far as the RMA code is concerned, here's another extract from my forthcoming book. Anyone who wants the various European codes or can add to the list is welcome to e-mail me...

73, Andy G8PTH.

USA (pre-RMA code)

Until about 1932, tube designations included two letters and three numbers, as in ëUV199í. The letters were a designator for the base configuration, and the first digit was a designer/manufacturer code. The ëUVí denotes 4-pin stub base and the 1xx is Western Electric. The ëPA 250í does not follow this completely---it denotes the RCA design, but has PA instead of UX for the base designator.

USA (Radio Manufacturers Association, Radio Television Manufacturers Association)

This code consists of digits, a group of letters, digits plus an optional suffix. A variant is used by the Russians.

The first digits give the heater voltage rating in bands, a point misunderstood by many. 0 denotes cold cathode, 1 between 0.1 and 2.1, 2 between 2.1 and 2.9, 3 between 3.0 and 3.9, 5 between 5.0 and 5.9, 6 between 6.0 and 6.9, and so on. The exception is that codes 7 and 14 are used to indicate 6.3V and 12.6V valves with a loctal base. Not all tubes follow the rules; for instance 2C22 has 6.3V heaters. Letters specify the type of valve, but there appears to be no consistency of coding. S often indicates a single-ended (no top cap) version of an earlier valve with such a cap. Combinations such as AB, AC, AD and AE were used once the single letters were all used. P as a second letter indicates a cathode ray tube.

Second digits give either the number of active electrodes or element, or else the number of external connections. In metal tubes the shell counts as one element. Shielding by or in the base does not count as an element.

Whenever possible the 12V equivalent of a 6V tube retains the same letters, thus 6SK7GT and 12SK7GT are similar except for the heater rating.

The suffix letters specify the type of envelope or base. The code is:

G	large Glass envelope on octal base
GC	Glass Compact, a tubular glass envelope
GT	Glass Tubular, the smallest glass envelope
GT/G	Glass Tubular, interchangeable with G and GT types
LT	Locking base
M	Metal-coated glass envelope on octal base
W	Military type assigned on behalf of armed forces
X	Low-loss base for HF use (ceramic)
Y	Intermediate-loss base (phenolic)
A,B, C, D, E, F	modified version of a type without other suffix

Valves used specifically for industrial purposes have a sequential designation beginning with the number 5500.

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: "Joseph W. Pinner" <kc5ijd@dns1.net-connect.net>
Subject: Re: Tube letter designations
Message-ID: <199607031228.HAA26247@dns1.net-connect.net>

>Not all tubes follow the rules; for instance 2C22 has 6.3V heaters. fix

This is not correct.

The 2C22 does follow the rules - for a designator system which was fundamentally abandoned by the late forties, e.g. 2C40, 2E22, 2E24, 4D21, 3B22, 2G21 are all RETMA coded uder this system. Don't have the complete code in front of me at the moment so this is totally from memory, but the first digit refers to filament current - the larger the digit, reflecting increasing range of filament draw. The letter indicates, B-diode, C-triode, D-tetrode, E-pentode, F-hexode, G-heptode, etc. The following digits begin at 15 (to avoid confusion with the other system) and are just sequential.

>Valves used specifically for industrial purposes have a sequential
>designation beginning with the number 5500.

RCA used 1600 numbers for special purpose/industrial tubes, and Sylvania used 1200 numbers.

73

Joseph W Pinner
Lafayette, LA
KC5IJD
EMail: kc5ijd@net-connect.net or kc5ijd@aol.com

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: sinned@VNET.IBM.COM
Subject: Vanity program report/ Callsign change
Message-ID: <199607031631.LAA18093@uro.theporch.com>

I mailed my form 610V on 5-31-96. By 6-18 my callsign change was in the QRZ database and on 7-1 received the printed license. A real improvement in performance compared to the 4.5 months I waited in 1993 to get a call.

I requested my father's old call of W5FRS. He's been SK since '72 but I have met many of his contemporaries since getting back into ham radio. These now very elderly hams have related to me what was probably his main contribution to Hamdom. His career was lifetime military service as a supply officer and a director in the MARS program. He used his position to acquire and distribute literally tons of government surplus gear to hams throughout the '50s and early '60's. A few items have been given to me by these old hams who say "your dad got this for me when I really needed it, and I want you to have it now". Anyhow, KC5EPZ is history and W5FRS is back on the air, using all BA gear, of course.
CUL
Dennis W5FRS
Irving (nr Dallas), Texas

From boatanchors@theporch.com Wed Jul 3 02:43:00 1996
Subject: Vintage National Receivers to be Sold

You may have seen some of my other ads recently. This is all part of an estate I am selling for an old radio collector friend of mine and I am trying to do my best for his family. My expertise is in old broadcast radios, not communications receivers, so I need some help determining the value of some of his sets.

I will be selling the following vintage National receivers within the next couple of months through ads in this newsgroup and through Antique Radio Classified. I know some of these are very difficult to find and are collectible. I'd like anyone with opinions or offers to reply back. Also, if anyone knows of other places these should be advertised, let me know.

All sets are untested and should be considered complete and original, unless otherwise noted.

1. National Thrill-Box SW5 - cabinet has some surface rust, no power supply. Overall condition is good. It appears complete.

2. AGS-X with rackmount, 9 coilsets in National rackmounts, rack-mounted National power supply, and original AGS (not AGS-X) instruction manual. Overall condition is excellent. Paint & lettering are very nice. I opened this set up and the inside looked very nice with all original tube shields , caps, a Bliley crystal, etc. No rust.

3. HRO-M with 8 coilsets and a wood rack that holds 7 of these coilsets. No power supply or rack mount. There is one extra potentiometer mounted on front panel (1/4" hole) which I don't believe is correct. The shaft is longer than the other controls and it doesn't have a knob. I don't see this control in the HRO pictures I have. Includes a HRO-5 instruction book. Overall condition is very good. Paint is pretty good, but not quite as nice as on the AGS-X (item 2).

4. National 1-10 with 6 coilsets, extra 954 acron tube NIB, & box of 8 plugin crystals. overall condition is excellent.

5. FB-7 with Preselector, National Velvet type 5897AB power supply, and 3 coilsets. The spacers for mounting the Preselector to the receiver are missing. Overall condition is excellent.

6. National NC-44 in very good condition except dial glass is missing, dial string is off, and AC cord is bad. Black crinkle paint is very nice. No speaker.

7. National NC-46 with matching speaker (minor stain on cloth). Overall condition is very good.

8. National Criterion. AM dial string off, paint fair. Overall condition is good.

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Thanks,  Greg Farmer

------ Forwarded message ends here ------

                             Dick Dillman
                       WPE2VT  N6VS  ex-WA2BJK
                        <ddillman@igc.apc.org>
                      Collector of Heavy Metal:
                Harleys, Willys and Radios Over 100lbs.



From boatanchors@theporch.com  Wed Jul  3 16:51:43 1996
From: Mikhael Brown <mikhael@hpcmmp13.sj.hp.com>
Subject: WTB BC-610 Junct. Bx and Cables
Message-ID: <199607031405.AA102952756@hpcmmp13.sj.hp.com>


  Need help comleting the restoration of my BC-610.  I am in need of
  the cables which go from the transmitter to the speech amp and from
  the speech amp to the JB-70 Junction box. I also need the JB-70
  junction box.

  If you have any of the above, let me know.  (510) 505-5582 or e-mail me.

  73

     Mike N6WIG



  --
  mikhael@hpcmmp13.sj.hp.com





From boatanchors@theporch.com  Wed Jul  3 02:43:00 1996
From: "William C. Robbins" <billrobb@serv01.net-link.net>
Subject: WTB: Heath Test manuals
Message-ID: <199607022340.TAA26492@serv01.net-link.net>

This is forwarded from rec.radio.swap
Please respond to Matt:

n8ugd@serv01.net-link.net
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oooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooo

I am looking for the following Heathkit Test Equiptment manuals:

V-4
V-6
IT-12
SG-7
SG-8   (Parts list only)

If you have any of these manuals and will sell the original or photocopy it, please let me know.

Thanks,

Matt, N8UGD

From boatanchors@theporch.com Wed Jul 3 16:51:43 1996
From: ks0f@i1.net (MIKE SANDERS)
Subject: WTD sweep generator
Message-ID: <199607031424.JAA22084@mail1.i1.net>

Greetings All,
I am looking for a sweep generator that will go down to 1 meg or so and up through at least low vhf. A reasonably priced working serviceable unit is the preference. Any help or leads? TIA.   73 de KS0F Mike
ks0f@i1.net